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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.17/GV/CEMENT/2014-15 Date: 21.04.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. G. Vasu,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.
REFERENCE	:	EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	190 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	475 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	28.50 %	-

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Job No.: CTCE/BBMP/W.No.17/GV/SAND/2014-15 : 21.04.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.

Agency : **Mr. G. Vasu,** Contractor, Bangalore.

Name of Work : Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.

Reference : EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014

Date of Testing : 21.04.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	75	3.75	3.75	96.3	90-100
2.36	258	12.90	16.65	83.4	75-100
1.18	473	23.65	40.30	59.7	55-90
600 Micron	449	22.45	62.75	37.3	35-59
300 Micron	512	25.60	88.35	11.7	8-30
150 Micron	186	9.30	97.65	2.4	0-10

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Job No.: CTCE/BBMP/W.No.17/GV/AGG/2014-15 : 21.04.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.

Agency : **Mr. G. Vasu,** Contractor, Bangalore.

Name of Work : Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.

Reference : EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014

Date of Testing : 21.04.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25325**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	962	3.80	3.80	96.20	95-100
20	16253	64.18	67.98	32.02	30-70
10	5165	20.39	88.37	11.63	10-35
4.75	2361	9.32	97.69	2.31	0-5

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Job No.: CTCE/BBMP/W.No.17/GV/AGG/2014-15 : 21.04.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.

Agency : **Mr. G. Vasu,** Contractor, Bangalore.

Name of Work : Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.

Reference : EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014

Date of Testing : 21.04.2014

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	178	3.6	3.6	96.44	95-100
10	3297	65.9	69.5	30.50	25-55
4.75	1384	27.7	97.2	2.82	0-10

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Job No.: CTCE CTCE/BBMP/W.No.17/GV /STEEL/2014-15 23.04.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. G. Vasu,** Contractor, Bangalore.
Name of the Work	:	Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.
Reference	:	EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014
Date of Test	:	23.04.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	514	557	13.25	O.K	O.K

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Job No.: CTCE CTCE/BBMP/W.No.17/GV /STEEL/2014-15 23.04.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. G. Vasu,** Contractor, Bangalore.
Name of the Work	:	Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.
Reference	:	EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014
Date of Test	:	23.04.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	517	560	13.50	O.K	O.K

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Job No.: CTCE/BBMP/W.No.17/GV/Kerb Stone/2014-15 15.05.2014

CEMENT CONCRETE CORE (KERB STONE) TEST REPORT

Client	:	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. G. Vasu,** Contractor, Bangalore.
Name of work	:	Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17 BBMP, Bangalore.
Reference	:	EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Kerb Stone
Date of Testing	:	15.05.2014

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	75.00	0.371	2519.32	1.50	0.955	24.5	12.49	13.49	12.89	16.11
2	50.00	76.00	0.378	2533.08	1.52	0.960	24.7	12.57	13.57	13.03	16.29
3	50.00	77.00	0.386	2553.09	1.54	0.965	25.0	12.71	13.72	13.24	16.55

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Job No.: CCTCE/BBMP/W.No.17/GV/CUBE/2014-15 23.05.2014

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. G. Vasu,** Contractor, Bangalore.
Name of the work	: Construction of RCC drain at 11th Cross of Muthyalanagar in Ward No. 17, BBMP, Bangalore.
Reference	: EE/RRND/Wo.No./307/2013-14 Dated: 26.02.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.04.2014	23.05.2014	8.184	475.8	21.15
2	25.04.2014	23.05.2014	8.265	502.7	22.34
3	25.04.2014	23.05.2014	8.314	492.6	21.89

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